

Research Article

Digital Entrepreneurship Education, Franchise Knowledge, and Franchise Entrepreneurial Intention: A Study of Direct and Indirect Relationships

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ABSTRACT

Digital entrepreneurship education has become increasingly relevant in preparing individuals in higher education and university graduates to explore entrepreneurial opportunities. However, its relationship with franchise entrepreneurial intention and the role of franchise knowledge in this relationship require further investigation. This study examines the relationships between Digital Entrepreneurship Education (DEE), perceived Franchise Knowledge (FK), and Franchise Entrepreneurial Intention (FEI), including the statistical mediating role of FK. Using a quantitative cross-sectional survey design, data were collected through an online questionnaire from 200 current university students and graduates in Indonesia, selected through purposive sampling. The data were analyzed using partial least squares structural equation modeling (PLS-SEM). The results show that DEE is positively and significantly associated with FEI and perceived FK, while perceived FK is positively and significantly associated with FEI. Furthermore, the indirect relationship between DEE and FEI through FK is statistically significant. The significant direct and indirect relationships are consistent with complementary partial mediation, suggesting that perceived franchise knowledge represents one statistical pathway within the proposed model linking digital entrepreneurship education with franchise entrepreneurial intention. These findings contribute to the literature on entrepreneurship education by extending the discussion to franchising as a specific entrepreneurial pathway. Practically, the results highlight the relevance of integrating digital entrepreneurship education with franchise-related learning opportunities in higher education. However, the cross-sectional design and purposive sampling limit causal interpretation and generalizability. Future research could examine additional psychological and contextual factors, including entrepreneurial self-efficacy, attitude toward franchising, perceived behavioral control, and perceived risk.

Keywords: Digital Entrepreneurship Education; Entrepreneurship Education; Franchise Knowledge; Franchise Entrepreneurial Intention; PLS-SEM.

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1. Introduction

Franchising has become an important business model that provides individuals with an alternative pathway to entrepreneurship by combining established business concepts, brands, operational systems, and support from franchisors. In Indonesia, the franchise sector continues to demonstrate considerable economic potential. As of February 2025, 311 franchise providers had valid franchise registration certificates (STPW) in Indonesia (Kementerian UMKM, 2026), with food and beverage representing the largest segment of domestic franchises. The number of franchise outlets was also projected to increase from 231,514 units in 2024 to 254,751 units by 2029. Franchising is offering individuals a viable entrepreneurial pathway by providing established business

models. This approach allows entrepreneurs to leverage proven concepts rather than starting a business from scratch, enhancing competitiveness and market presence (Keskin, 2017).

The development of franchising creates an opportunity for higher education institutions to introduce franchise entrepreneurship as part of entrepreneurship education. Franchise education can provide prospective entrepreneurs with knowledge about the franchise business model, operational requirements, financial considerations, and the relationship between franchisors and franchisees. Recent evidence supports the importance of this educational approach. Cumberland et al. (2025), for example, found that franchise courses increased students knowledge of the franchise business model, entrepreneurial self-efficacy, and desirability of pursuing franchising as a career. Cumberland, et al. (2025) & Denise M, et al. (2025) suggests that education may play an important role in preparing students to recognize franchising as a viable entrepreneurial opportunity.

Nowadays, digitalization is having an increased effect on entrepreneurship education (DEE), which provides students with digital technology-based skills and the ability to recognize and take advantage of possibilities in a digital business environment (Utami, 2025). Recent studies have consistently demonstrated the relevance of digital entrepreneurship education to entrepreneurial intention. Wibowo et al. (2023) testing Indonesian university students, found that digital entrepreneurship education and digital entrepreneurial knowledge contribute to students digital entrepreneurial intentions. Nguyen and Nguyen (2024) similarly found that digital entrepreneurship education is associated with students digital entrepreneurial intention in an emerging economy context. More recent evidence indicates that digital entrepreneurship education (DEE) can influence entrepreneurial intention using psychological and cognitive mechanisms like a digital entrepreneurial self-efficacy (Duong, et.al, 2024). However, most of the existing studies examine general entrepreneurial intent or digital entrepreneurial intent, not on the intention to initiate franchising as an entrepreneurial path (Salamzadeh, Sangosanya, Salamzadeh, & Braga, 2022).

A systematic literature review by (Awang & Mochtar, 2025; El Khaddar, et al, 2025; Kencana et al, 2025) identified educational, cognitive, individual, environmental, and demographic factors as important areas in digital entrepreneurial intention research, while also highlighting the need for further research into different contexts and determinants. (Indira, et al. 2024). In parallel, franchise entrepreneurship research has begun to distinguish franchisee intention from general entrepreneurial intention. Croonen et al. (2022) identified the intention to be a franchisee as a specific entrepreneurial intention and demonstrated that individual objectives and cognitive evaluations of franchising are relevant regarding these intentions. In addition, Gazi et al. (2025) examined the intention of university students to participate in franchising and found that franchise-oriented entrepreneurial intention can be explained by specific motives, rather than being thought of as general entrepreneurial intention.

Despite these developments, an important gap remains. Existing digital entrepreneurship education studies primarily investigate outcomes such as digital entrepreneurial intention, self-efficacy, entrepreneurial alertness, or entrepreneurial mindset (Awang & Mokhtar, 2025). Meanwhile, studies on franchising have mainly focused on individual motivation, attitudes, perceived behavioral control, or the impact of dedicated franchise courses (Kukec & Khawaja, 2023). The role of franchise-specific knowledge as a mechanism linking digital entrepreneurship education to franchise entrepreneurial intention remains insufficiently examined. In other words, previous research has provided evidence that education can influence entrepreneurial intention and that franchise education can increase franchise-related knowledge and interest, but

the pathway Digital Entrepreneurship Education → Franchise Knowledge → Franchise Entrepreneurial Intention has not been sufficiently integrated into a single empirical model. This represents an important research gap because students may receive substantial digital entrepreneurship education without necessarily understanding how a franchise business actually operates.

Accordingly, this study proposes Franchise Knowledge (FK) as a mediating variable between Digital Entrepreneurship Education (DEE) and Franchise Entrepreneurial Intention (FEI). The proposed model is informed by the Theory of Planned Behavior (TPB) (Ajzen, 1991), which explains how individuals' beliefs and perceptions relate to their intentions. In this study, digital entrepreneurship education is examined in relation to franchise knowledge, while franchise knowledge is investigated as a potential correlate of franchise entrepreneurial intention. The model also examines whether franchise knowledge mediates the relationship between digital entrepreneurship education and franchise entrepreneurial intention. As the study focuses on franchise-specific knowledge and educational exposure, the core TPB constructs of attitude, subjective norm, and perceived behavioral control are not explicitly included. Therefore, the model represents a focused application of TPB rather than a comprehensive test of the theory

The contribution of this study lies in three aspects. First, it focuses on franchise entrepreneurial intention as a specific entrepreneurial outcome rather than general or digital entrepreneurial intention. Second, it examines perceived franchise knowledge as a potential mediating variable connecting digital entrepreneurship education and franchise entrepreneurial intention. Third, it investigates these relationships among individuals who are currently pursuing or have completed higher education, including bachelor's, master's, and doctoral degree programs. By including both current university students and graduates with prior exposure to franchise-related learning, the study examines the proposed relationships within a sample representing different educational backgrounds and academic statuses.

Therefore, this study aims to examine the direct relationship between Digital Entrepreneurship Education and Franchise Entrepreneurial Intention and the mediating role of Franchise Knowledge among current university students and graduates who have received franchise-related learning. The findings are expected to contribute to the entrepreneurship education literature by extending the discussion of entrepreneurial intention to franchising as a specific entrepreneurial pathway. They may also inform the development of entrepreneurship learning opportunities that integrate digital knowledge and franchise-related content.

Research Questions

RQ1: Is Digital Entrepreneurship Education significantly associated with Franchise Entrepreneurial Intention among current university students and graduates?

RQ2: Is Digital Entrepreneurship Education significantly associated with Franchise Knowledge among current university students and graduates?

RQ3: Is Franchise Knowledge significantly associated with Franchise Entrepreneurial Intention among current university students and graduates?

RQ4: Does Franchise Knowledge statistically mediate the relationship between Digital Entrepreneurship Education and Franchise Entrepreneurial Intention?

2. Method

2.1 Research Design

This study used a quantitative research approach with a cross-sectional survey design. The study aimed to examine the relationship between Digital Entrepreneurship Education (DEE), Franchise Knowledge (FK), and Franchise Entrepreneurial Intention (FEI). This study examined the direct and indirect associations between digital entrepreneurship education and franchise entrepreneurial intention, with perceived franchise knowledge as a mediating variable. The research model consists of three latent constructs: Digital Entrepreneurship Education as the exogenous variable, Franchise Knowledge as the mediating variable, and Franchise Entrepreneurial Intention as the endogenous variable. The proposed relationships were tested using Partial Least Squares Structural Equation Modeling (PLS-SEM). This study focuses on examining predictive relationships among latent constructs and includes a mediation relationship. PLS-SEM was selected due to its prediction-oriented objective and its suitability for examining relationships among multiple latent constructs, including the indirect effect of franchise knowledge as a mediator (Hair et al., 2022).

2.2 Population and Sample

The target population consisted of individuals who were currently pursuing or had completed bachelor's (S1), master's (S2), or doctoral (S3) degree programs, particularly in economics, management, or entrepreneurship-related fields. Respondents were selected based on their prior exposure to franchise-related learning and entrepreneurship education, which were relevant to examining franchise entrepreneurial intention. Respondents were recruited directly from individuals associated with several universities in East Java, including Universitas Brawijaya, Universitas Negeri Malang, BINUS University @Malang Campus, Universitas Islam Malang, Politeknik Negeri Malang, and Universitas Muhammadiyah Malang.

The study employed a purposive sampling technique. Respondents were required to meet the following criteria: (1) had received franchise-related learning, whether through formal coursework or other educational materials, (2) had received or accessed entrepreneurship-related learning, (3) actively used digital media, and (4) had basic awareness of franchise businesses. Both current university students and graduates were eligible to participate, if they met the inclusion criteria. Respondents were not required to own or operate a franchise because the study focused on their intention to become franchisees.

The target sample size was approximately 200 respondents, considering the complexity of the proposed PLS-SEM model and recommendations for sample size determination in PLS-SEM (Hair et al., 2022). The final sample comprised 200 eligible respondents based on the valid responses collected.

2.3 Data Collection

Primary data were collected through a structured online questionnaire administered to eligible participants using purposive sampling. Respondents were recruited directly, including individuals who were currently pursuing or had completed undergraduate, master's, or doctoral education. Of the 250 individuals invited, 220 responded, and 200 were included in the final sample after eligibility screening. The screening process included a question asking whether respondents had previously received franchise-related learning. Respondents who had not received such learning were excluded from the study. Participation was voluntary, and respondents' names

were not collected to maintain anonymity. Informed consent was obtained before questionnaire completion.

Before the main survey, the questionnaire was pilot-tested with 25 eligible participants. Participants provided feedback on the clarity and comprehensibility of the measurement items. The feedback indicated that the items were understandable and relevant to the research context; therefore, no items were deleted or revised. The pilot-test responses were excluded from the final dataset. All measurement items were assessed using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

2.4 Measurement of Variables

The study measured three constructs: Digital Entrepreneurship Education (DEE), Franchise Knowledge (FK), and Franchise Entrepreneurial Intention (FEI). DEE refers to respondents' perceptions of the extent to which digital entrepreneurship education provides relevant entrepreneurial knowledge and skills. FK refers to respondents' perceived understanding of the franchise business system, including franchisor–franchisee relationships and basic franchise management. FEI refers to respondents' intention to become franchisees and establish a business through a franchise model.

Table 1. Variables, Indicators, and Measurement Items

Variable	Indicator	Measurement Item	Supporting References
Digital Entrepreneurship Education (DEE)	Entrepreneurial learning	DEE1. Digital learning provides me with knowledge about entrepreneurship.	Duong et al. (2024); Martin et al. (2013)
	Digital technology skills	DEE2. Digital entrepreneurship education helps me understand how digital technology can be used in business.	Duong et al. (2024); Nguyen and Nguyen (2024)
	Entrepreneurial knowledge	DEE3. Digital entrepreneurship education enhances my understanding of entrepreneurial activities.	Wibowo et al. (2023); Zhang et al. (2022)
	Application of digital knowledge	DEE4. Digital entrepreneurship education helps me understand how to apply digital tools when starting a business.	Nguyen and Nguyen (2024); Awang et al. (2025)
Franchise Knowledge (FK)	Understanding of franchising	FK1. I understand the basic concept of franchising.	Cumberland et al. (2025); Gazi et al. (2025)
	Knowledge of franchise systems	FK2. I understand how the franchise business system operates.	Cumberland et al. (2025); Croonen et al. (2022)

Franchise Entrepreneurial Intention (FEI)	Understanding franchise relationships	FK3. I understand the roles and responsibilities of franchisors and franchisees.	Croonen et al. (2022); Cumberland et al. (2025)
	Knowledge of franchise requirements	FK4. I understand the basic requirements for becoming a franchisee.	Croonen et al. (2022); Lertkornkitja (2024)
	Intention to become a franchisee	FEI1. I intend to become a franchisee in the future.	Croonen et al. (2022); Ajzen (1991)
	Franchise career choice	FEI2. I would consider franchising as a career option.	Croonen et al. (2022); Gazi et al. (2025)
	Future franchise plans	FEI3. I plan to pursue a franchise business in the future.	Croonen et al. (2022); Lertkornkitja (2024)
	Willingness to start a franchise	FEI4. I am willing to try to start a franchise business.	Gazi et al. (2025)

*Source: Primary data, 2026

Each construct was measured using four reflective indicators. The measurement items were adapted from relevant literature on digital entrepreneurship education, perceived knowledge, and entrepreneurial intention, with wording modified to reflect the franchise context. The items were reviewed for contextual relevance and consistency. Because FK was measured through self-reports rather than an objective knowledge test, it represents perceived franchise knowledge rather than objectively demonstrated knowledge or actual learning gains. Each construct was measured using four indicators, resulting in a total of 12 measurement items across the three constructs. All constructs were specified as unidimensional reflective constructs.

2.5 Data Analysis

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS. The analysis was conducted in two stages: evaluation of the measurement model and evaluation of the structural model. First, the measurement model was evaluated to establish the reliability and validity of the constructs. Indicator reliability was assessed through outer loadings, with values of approximately 0.70 or higher considered acceptable. Internal consistency reliability was assessed using Cronbach's alpha and composite reliability, with values above 0.70 generally indicating satisfactory reliability. Convergent validity was evaluated using Average Variance Extracted (AVE), with a minimum recommended value of 0.50. Discriminant validity was assessed using the Heterotrait-Monotrait ratio (HTMT).

Second, the structural model was evaluated to examine the hypothesized relationships among the constructs. The coefficient of determination (R^2) was assessed to determine the explanatory power of the model. The significance of the hypothesized relationships was tested using the bootstrapping procedure. The analysis examined the path coefficients, t-values, and p-values. In addition to the direct effects, the indirect effect of Digital Entrepreneurship Education on Franchise Entrepreneurial Intention through Franchise Knowledge was examined to determine the mediating role of Franchise Knowledge.

2.6 Hypothesis Testing

Based on the proposed conceptual framework, four hypotheses were developed:

H1: Digital Entrepreneurship Education has a positive effect on Franchise Entrepreneurial Intention.

H2: Digital Entrepreneurship Education has a positive effect on Franchise Knowledge.

H3: Franchise Knowledge has a positive effect on Franchise Entrepreneurial Intention.

H4: Franchise Knowledge mediates the relationship between Digital Entrepreneurship Education and Franchise Entrepreneurial Intention.

The mediation hypothesis was assessed by examining the significance of the indirect effect using bootstrapping. The mediation analysis was used to determine whether digital entrepreneurship education influences students intention to become franchisees through their perceived knowledge of the franchise business model

3. Result

3.1 Respondent Profile

The study involved 200 respondents who were either currently pursuing or had completed bachelor's (S1), master's (S2), or doctoral (S3) degree programs. Participants were recruited through purposive sampling based on their prior exposure to franchise-related learning and the study's eligibility criteria. The sample included both current university students and university graduates, representing individuals with different educational backgrounds and academic statuses.

As presented in Table 2, respondents in the master's degree category accounted for the largest proportion of the sample (42.5%, $n = 85$), followed by those in the bachelor's degree category (38.5%, $n = 77$) and doctoral degree category (19.0%, $n = 38$). These categories represent the educational levels reported by respondents, including degrees they were pursuing or had completed at the time of data collection.

Regarding age, most respondents were over 35 years old (90.0%, $n = 180$), while 10.0% ($n = 20$) were aged 35 years or younger. In terms of gender, female respondents accounted for 54.0% ($n = 108$), whereas male respondents represented 46.0% ($n = 92$).

The respondent profile indicates that the sample was predominantly composed of adults over 35 years old, with the largest proportion reporting master's-level education. Given the inclusion of both current university students and graduates, these characteristics should be considered when interpreting the findings. Consequently, the results should not be generalized exclusively to active university students or assumed to represent the broader university student population.

Table 2. Respondent Profile

Characteristics	Category	Frequency (n)	Percentage (%)
Educational level	Bachelor's degree (S1)	77	38.5
	Master's degree (S2)	85	42.5
	Doctoral degree (S3)	38	19.0
Total		200	100.0
Age	≤ 35 years	20	10.0
	> 35 years	180	90.0

Total		200	100.0
Gender	Female	108	54.0
	Male	92	46.0
Total		200	100.0

Source: Primary data, 2026.

Note. Educational level refers to the degree program respondents were pursuing or had completed at the time of data collection. The sample includes both current university students and graduates.

3.2. Measurement Model

Table 3. Measurement Model Assessment

Construct	Indicator	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE	Decision
Digital Entrepreneurs hip Education (DEE)	DEE1	0.844	0.793	0.795	0.866	0.618	Valid
	DEE2	0.742					Valid
	DEE3	0.760					Valid
	DEE4	0.795					Valid
Franchise Knowledge (FK)	FK1	0.778	0.767	0.791	0.848	0.583	Valid
	FK2	0.833					Valid
	FK3	0.695					Valid
	FK4	0.741					Valid
Franchise Entrepreneurial Intention (FEI)	FEI1	0.647	0.742	0.763	0.836	0.563	Valid
	FEI2	0.703					Valid
	FEI3	0.834					Valid
	FEI4	0.803					Valid

*Source: Primary data, 2026

Table 3 indicates that outer loadings of 0.70 or higher are generally considered satisfactory. Cronbach's alpha, rho_A, and composite reliability values above 0.70 indicate acceptable internal consistency reliability, while an average variance extracted (AVE) value above 0.50 indicates adequate convergent validity. Although indicators FK3 (0.695) and FEI1 (0.647) have outer loadings below the recommended threshold, they were retained because the constructs demonstrate acceptable composite reliability and AVE values, and the indicators are considered conceptually relevant to their respective constructs. Specifically, FK3 represents respondents' understanding of the roles and responsibilities of franchisors and franchisees, an important aspect of perceived franchise knowledge. Meanwhile, FEI1 directly measures respondents' intention to become franchisees in the future, which is central to the franchise entrepreneurial intention construct. Retaining these indicators therefore helps preserve the conceptual coverage of the respective constructs, although their relatively low loadings indicate weaker individual indicator reliability. Overall, the measurement model demonstrates acceptable internal consistency reliability and convergent validity.

3.3 Structural Model and Hypothesis Testing

The structural model was evaluated using bootstrapping in SmartPLS with 5,000 subsamples, a two-tailed significance test at the 5% level, and 95% confidence intervals. Significance was determined by $p < 0.05$ and $t > 1.96$. The default sign-change option in SmartPLS was retained. The hypothesis testing results are presented in Table 4.

Table 4. Hypothesis Testing Results

Hypothesis	Relationship	β (Original Sample)	STDEV	t-statistic	p-value	95% CI	Decision
H1	DEE $\rightarrow$ FEI	0.331	0.096	3.438	0.001	[0.147, 0.522]	Supported
H2	DEE $\rightarrow$ FK	0.618	0.058	10.722	0.000	[0.500, 0.731]	Supported
H3	FK $\rightarrow$ FEI	0.376	0.090	4.182	0.000	[0.193, 0.531]	Supported
H4	DEE $\rightarrow$ FK $\rightarrow$ FEI	0.232	0.063	3.706	0.000	[0.120, 0.353]	Supported

*Source: Primary data, 2026

The bootstrapping results indicate that all direct relationships are positive and statistically significant. Digital Entrepreneurship Education (DEE) has a positive and significant effect on Franchise Entrepreneurial Intention (FEI) ($\beta = 0.331$, $t = 3.438$, $p = 0.001$, 95% CI [0.147, 0.522]), supporting H1. DEE also has a positive and significant effect on Franchise Knowledge (FK) ($\beta = 0.618$, $t = 10.722$, $p < 0.001$, 95% CI [0.500, 0.731]), supporting H2. Furthermore, FK has a positive and significant effect on FEI ($\beta = 0.376$, $t = 4.182$, $p < 0.001$, 95% CI [0.193, 0.531]), supporting H3. These findings indicate that DEE is positively associated with both FK and FEI, while FK is positively associated with FEI.

Regarding the indirect effect, the results reveal that DEE has a positive and significant indirect effect on FEI through FK ($\beta = 0.232$, $t = 3.706$, $p < 0.001$, 95% CI [0.120, 0.353]). The confidence interval does not include zero, confirming the statistical significance of the indirect effect. Therefore, H4 is supported, indicating that FK mediates the relationship between DEE and FEI. Since the direct effect of DEE on FEI remains significant after FK is included in the model ($\beta = 0.331$, $p = 0.001$), the findings are consistent with complementary partial mediation: DEE is associated with FEI both directly and indirectly through FK.

Table 5. Coefficient of Determination (R^2)

Endogenous Construct	R^2	Adjusted R^2
Franchise Entrepreneurial Intention	0.405	0.399
Franchise Knowledge	0.382	0.379

*Source: Primary data, 2026

The coefficient of determination (R^2) was assessed to evaluate the explanatory power of the structural model. The results show that Franchise Entrepreneurial Intention has an R^2 value of 0.405 and an adjusted R^2 value of 0.399, indicating that Digital Entrepreneurship Education and Franchise Knowledge jointly explain 40.5% of the variance in Franchise Entrepreneurial Intention. Meanwhile, Franchise Knowledge has an R^2 value of 0.382 and an adjusted R^2 value of 0.379, indicating that Digital Entrepreneurship Education explains 38.2% of the variance in Franchise Knowledge. The adjusted R^2 values are slightly lower than the corresponding R^2 values, reflecting an adjustment for the number of predictors in the model. Overall, the results indicate that

the model has explanatory power for both endogenous constructs, although other factors beyond those included in the model may also contribute to franchise entrepreneurial intention and franchise knowledge.

Table 6. Heterotrait–Monotrait Ratio (HTMT)

Construct	Digital Entrepreneurship Education	Franchise Entrepreneurial Intention	Franchise Knowledge
Digital Entrepreneurship Education	—		
Franchise Entrepreneurial Intention	0.710	—	
Franchise Knowledge	0.753	0.749	—

The Heterotrait–Monotrait Ratio (HTMT) results indicate that all values are below the conservative threshold of 0.85. The HTMT values are 0.710 for Digital Entrepreneurship Education and Franchise Entrepreneurial Intention, 0.753 for Digital Entrepreneurship Education and Franchise Knowledge, and 0.749 for Franchise Entrepreneurial Intention and Franchise Knowledge. These results indicate satisfactory discriminant validity, suggesting that the three constructs are empirically distinct from one another.

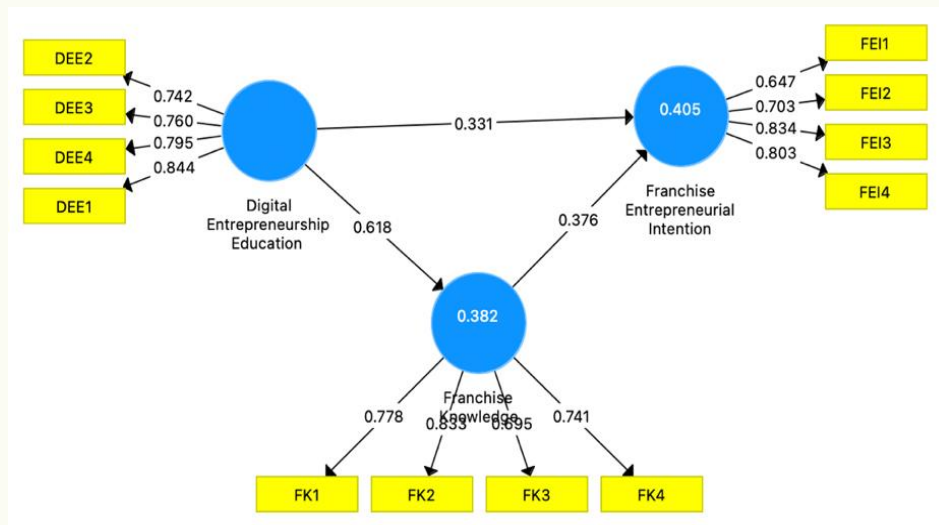


Figure 1. PLS-SEM Structural Model Results

The hypothesis testing results indicate that all four hypotheses are supported. Digital Entrepreneurship Education (DEE) has a positive and significant relationship with Franchise Entrepreneurial Intention (FEI), supporting H1. DEE also has a positive and significant relationship with Franchise Knowledge (FK), supporting H2. Furthermore, FK has a positive and significant relationship with FEI, supporting H3. Finally, the indirect effect of DEE on FEI through FK is positive and significant, supporting H4. This finding suggests that FK mediates the relationship between DEE and FEI, indicating that DEE is associated with entrepreneurial intention both directly and indirectly through franchise knowledge.

4. Discussion

4.1. Digital Entrepreneurship Education and Franchise Entrepreneurial Intention

The first research question examined whether Digital Entrepreneurship Education is directly associated with Franchise Entrepreneurial Intention. The findings indicate a positive and statistically significant relationship between DEE and FEI, supporting H1. This suggests that respondents who report greater exposure to digital entrepreneurship education also tend to report stronger intentions to pursue entrepreneurship through franchising. This result is consistent with research examining the relationship between entrepreneurship education and entrepreneurial intention. Duong et al. (2024), in their study of digital entrepreneurial education and digital entrepreneurial intention, examined the roles of digital entrepreneurial self-efficacy and digital technology anxiety. Their findings indicated that digital entrepreneurial education and self-efficacy were significantly associated with digital entrepreneurial intention, while self-efficacy partially mediated the relationship between education and intention. Although digital entrepreneurial intention differs from franchise entrepreneurial intention, the study provides relevant evidence that education can be associated with intentions to pursue entrepreneurial activities in digital contexts.

Similarly, Nguyen and Nguyen (2024) examined the relationship between digital entrepreneurship education and intention among university students in an emerging economy. Their study highlights the relevance of educational environments to students' digital entrepreneurial mindsets and intentions. Wibowo et al. (2023) also investigated digital entrepreneurship education and digital entrepreneurial intention, with entrepreneurial alertness as a mediating mechanism. Together, these studies provide a relevant foundation for understanding the association between digital entrepreneurship education and entrepreneurial intentions among university students. Zhang et al. (2022) examined the relationship between entrepreneurship education and entrepreneurial intention among college students. Their work offers a broader synthesis of research on entrepreneurship education and entrepreneurial intention. Nevertheless, differences in educational approaches, entrepreneurial contexts, and intention measures mean that these findings should not be assumed to apply identically to franchise entrepreneurial intention.

The present finding extends this literature by focusing specifically on current university students' and graduates' intentions to pursue entrepreneurship through franchising. Franchising represents a distinctive entrepreneurial pathway because it combines the opportunity to operate a business with an established business model and an ongoing relationship with a franchisor. Consequently, respondents' reported exposure to digital entrepreneurship education may be relevant to their consideration of franchising alongside other entrepreneurial alternatives.

The TPB provides a theoretical explanation for this association. Educational experiences may provide information relevant to the beliefs underlying attitudes and perceived behavioral control, thereby informing how individuals evaluate entrepreneurship as a possible career. However, the current study does not directly test these psychological mechanisms. The relationship should therefore be interpreted as an association rather than proof that digital entrepreneurship education causes stronger franchise entrepreneurial intention. The significant relationship between DEE and FEI also remains when FK is included in the model. This indicates that the association between digital entrepreneurship education and franchise entrepreneurial intention is not fully accounted for by perceived franchise knowledge alone. Other mechanisms, such as entrepreneurial self-efficacy, attitude toward franchising, perceived behavioral control,

or perceived feasibility, may also be relevant, but these mechanisms require further empirical testing.

Accordingly, the first research question can be answered positively: Digital Entrepreneurship Education is significantly and positively associated with Franchise Entrepreneurial Intention. This finding extends the digital entrepreneurship education literature by examining a more specific entrepreneurial pathway and suggests that educational exposure and perceived franchise knowledge represent related but distinct dimensions in understanding respondents' intentions.

4.2. Digital Entrepreneurship Education and Franchise Knowledge

The second research question examined whether Digital Entrepreneurship Education (DEE) is associated with perceived Franchise Knowledge (FK). The findings provide strong empirical support for this relationship. Digital Entrepreneurship Education is positively and significantly associated with perceived Franchise Knowledge, supporting H2. The relatively large coefficient indicates that DEE has a substantial positive association with respondents' perceived knowledge regarding franchising.

This finding can be explained from an educational and knowledge-development perspective. Entrepreneurship education provides individuals with structured exposure to business concepts, opportunity recognition, decision-making, and entrepreneurial processes. In the context of digital entrepreneurship education, such learning is further supported using digital information, platforms, technologies, and contemporary business practices. Consequently, educational exposure may provide individuals with the cognitive resources required to understand alternative business models, including franchising.

The finding is consistent with Wibowo et al. (2023), who found that digital entrepreneurship education and digital entrepreneurial knowledge contribute to students' digital entrepreneurial intentions. Their study also highlights the importance of entrepreneurial alertness in the relationship between education, knowledge, and entrepreneurial intention. Although their study focused on digital entrepreneurship rather than franchising, the result supports the broader argument that entrepreneurship-oriented education can develop entrepreneurial knowledge and cognitive capabilities. The finding is also particularly consistent with the franchise-specific evidence provided by Cumberland et al. (2025). Their study of undergraduate and MBA students found that franchise courses significantly increased students' knowledge of the franchise business model. The courses also improved entrepreneurial self-efficacy and the desirability of pursuing a career in franchising.

Thus, the present finding extends this evidence by identifying a positive association between respondents' perceived digital entrepreneurship education and their perceived franchise-specific knowledge. From the perspective of the Theory of Planned Behavior (TPB), knowledge can be viewed as an important antecedent of the beliefs underlying entrepreneurial decision-making. Ajzen's TPB proposes that behavioral intentions are formed through attitudes, subjective norms, and perceived behavioral control, which in turn are related to underlying behavioral, normative, and control beliefs. Digital entrepreneurship education may offer individuals information and learning experiences relevant to their understanding of the opportunities, requirements, risks, and mechanisms associated with franchising.

Accordingly, the second research question can be answered positively: Digital Entrepreneurship Education is significantly associated with perceived Franchise Knowledge. This finding indicates that higher levels of self-reported digital

entrepreneurship education are associated with higher levels of perceived franchise knowledge, without implying a causal relationship.

4.3. Franchise Knowledge and Franchise Entrepreneurial Intention

The third research question examined whether perceived Franchise Knowledge is associated with Franchise Entrepreneurial Intention (FEI). The findings indicate a positive and statistically significant relationship between FK and FEI, supporting H3. This suggests that respondents who report higher levels of perceived franchise knowledge also tend to report stronger intentions to pursue entrepreneurship through franchising. One possible explanation is that perceived knowledge may be associated with greater familiarity with the characteristics and requirements of the franchise business model. Understanding the relationship between franchisors and franchisees, operating procedures, business opportunities, and potential challenges may help prospective entrepreneurs evaluate franchising as a possible career or investment pathway. Perceived franchise knowledge may therefore be relevant to how individuals assess the feasibility and attractiveness of pursuing a franchise business.

This interpretation is consistent with the broader argument of Croonen et al. (2022), who investigated individual intentions to become franchisees by integrating Achievement Motivation Theory with the TPB. Their findings emphasize the relevance of individuals' motivations and cognitive evaluations of franchising in explaining franchisee intentions. Although their study did not test the same knowledge construct as the present research, it demonstrates that franchise entrepreneurial intention is associated with how individuals evaluate franchising rather than being solely a general entrepreneurial aspiration.

Further evidence comes from Gazi et al. (2025), who examined university students' intentions to pursue franchising. Their findings highlighted the importance of motivational factors, including need for achievement and desire for autonomy, as well as the role of cognitive evaluations such as attitude toward franchising and perceived behavioral control. Their research indicates that franchise entrepreneurial intention is a multidimensional outcome that cannot be fully understood through a single informational or motivational factor.

The findings can also be considered alongside Lertkornkitja (2024), who examined prospective entrepreneurs' franchise purchasing intentions. That study addresses a related but distinct outcome. Franchise purchasing intention concerns the intention to purchase a franchise opportunity, whereas franchise entrepreneurial intention concerns the intention to pursue entrepreneurship through franchising. This distinction is important because knowledge may be relevant to both decisions, but the considerations involved in evaluating a particular franchise purchase may differ from those involved in choosing franchising as an entrepreneurial pathway.

The TPB provides a useful framework for interpreting the relationship. Ajzen (1991) explains that intention is shaped by attitude, subjective norms, and perceived behavioral control. Although knowledge is not one of these three principal determinants, it may inform the beliefs underlying them. Individuals who perceive themselves as more knowledgeable about franchising may feel better informed when evaluating its advantages, requirements, and challenges. However, the current model does not directly test whether attitude or perceived behavioral control explains the relationship between FK and FEI.

Accordingly, the third research question can be answered positively: Perceived Franchise Knowledge is significantly and positively associated with Franchise Entrepreneurial Intention. This finding identifies perceived franchise knowledge as a

relevant correlate of respondents' intentions to pursue franchising, while recognizing that their intentions may also be associated with motivational, psychological, financial, and contextual considerations.

4.4. The Mediating Role of Franchise Knowledge

The fourth research question examined whether perceived Franchise Knowledge statistically mediates the association between Digital Entrepreneurship Education and Franchise Entrepreneurial Intention. The results support H4, indicating a positive and statistically significant indirect relationship between DEE and FEI through FK. This suggests that perceived franchise knowledge represents one pathway within the proposed statistical model linking digital entrepreneurship education to franchise entrepreneurial intention.

The mediation finding is consistent with the broader view that educational exposure may be related to entrepreneurial intention through intermediate cognitive and psychological mechanisms. Wibowo et al. (2023) examined entrepreneurial alertness as a mediator in the relationship between digital entrepreneurship education and digital entrepreneurial intention. Awang et al. (2026) investigated digital entrepreneurial attitude and digital entrepreneurial self-efficacy as parallel mediators in the relationship between digital entrepreneurship education and digital entrepreneurial intention. Their findings indicated significant indirect relationships through both mediators, suggesting that multiple psychological mechanisms may contribute to the association between educational exposure and entrepreneurial intention. Although neither study examined perceived franchise knowledge as a mediating variable, both provide relevant theoretical comparisons by indicating that the association between digital entrepreneurship education and entrepreneurial intention may involve different cognitive and psychological pathways. Research on franchise-specific education also provides a useful comparison. Cumberland et al. (2025) found that franchise courses were associated with changes in students' knowledge of the franchise business model, entrepreneurial self-efficacy, and the desirability of pursuing a career in franchising. Their findings suggest that franchise education may be relevant to several outcomes simultaneously. The present study complements this evidence by identifying a significant indirect association between digital entrepreneurship education and franchise entrepreneurial intention through perceived franchise knowledge.

The TPB further helps explain why knowledge may be relevant to this indirect relationship. According to Ajzen (1991), intention is shaped by attitude, subjective norms, and perceived behavioral control. Knowledge may provide information that contributes to the beliefs underlying these determinants. In the context of franchising, perceived knowledge may be associated with individuals' understanding of the characteristics and requirements of the business model when considering whether to pursue it. However, because the current study does not directly measure the TPB determinants as mediators, this explanation should be treated as a theoretical interpretation rather than a tested mechanism.

An important finding is that the direct relationship between DEE and FEI remains statistically significant when FK is included in the model. Taken together, the significant direct and indirect relationships are consistent with complementary partial mediation. In other words, perceived franchise knowledge statistically accounts for a portion of the association between digital entrepreneurship education and franchise entrepreneurial intention, while the remaining direct relationship suggests that other pathways may also be relevant. Potential mechanisms for future investigation include entrepreneurial self-efficacy, attitude toward franchising, perceived behavioral control, risk perception, financial capability, and perceived franchise attractiveness. These factors are relevant to

the wider literature on entrepreneurial and franchisee intention, including Croonen et al. (2022) and Gazi et al. (2025), but their roles as additional mediators are not established by the present model.

The mediation result should also be interpreted considering the study design. The cross-sectional data and self-reported measures do not establish temporal order or causal transmission. Thus, the findings demonstrate a statistically significant indirect association within the proposed model rather than definitive evidence that digital entrepreneurship education causes franchise knowledge to increase and subsequently produces stronger entrepreneurial intention. Accordingly, the fourth research question can be answered positively: Perceived Franchise Knowledge shows a statistically significant mediating effect in the modeled association between Digital Entrepreneurship Education and Franchise Entrepreneurial Intention. The finding contributes to the literature by identifying perceived franchise knowledge as one relevant statistical pathway linking digital entrepreneurship education with respondents' intentions to pursue entrepreneurship through franchising, while recognizing that the relationship may also reflect other unexamined mechanisms.

5. Conclusion

The findings indicate that Digital Entrepreneurship Education is positively and significantly associated with both perceived Franchise Knowledge and Franchise Entrepreneurial Intention. Perceived Franchise Knowledge is also positively and significantly associated with Franchise Entrepreneurial Intention and shows a statistically significant indirect effect in the relationship between Digital Entrepreneurship Education and Franchise Entrepreneurial Intention. The significant direct and indirect relationships are consistent with complementary partial mediation, suggesting that perceived franchise knowledge represents a statistical pathway within the proposed model linking digital entrepreneurship education with respondents' intentions to pursue franchising, while other pathways may also be relevant. These findings highlight the importance of examining both educational exposure and knowledge-related factors when understanding respondents' franchise entrepreneurial intentions.

This study has several limitations. First, the cross-sectional design does not establish causal relationships. Second, purposive online sampling limits generalizability and may introduce selection bias. Third, self-reported measures of perceived knowledge may differ from actual knowledge, and common-method bias cannot be ruled out. Fourth, the sample included both current university students and graduates, with 90% of respondents aged over 35 years. This composition limits the extent to which the findings can be generalized to younger university students or to either educational-status group separately. Finally, although the model explains a meaningful proportion of the variance in Franchise Entrepreneurial Intention, a substantial proportion remains unexplained, indicating that other relevant factors may contribute to respondents' intentions to pursue franchising.

Future research should employ longitudinal designs, more diverse samples, and objective measures of franchise knowledge to strengthen the robustness and generalizability of the findings. Future studies could also examine current university students and graduates separately to determine whether the relationships differ across educational-status groups. Additional variables, such as entrepreneurial self-efficacy, attitude toward franchising, perceived behavioral control, perceived risk, and financial capability, could be examined to provide a more comprehensive understanding of franchise entrepreneurial intention. For higher education institutions, experiential learning, franchise simulations, interactions with franchisors and franchisees, and

practical franchise-related activities may complement digital entrepreneurship education. However, the effectiveness of these approaches in strengthening franchise entrepreneurial intention requires further empirical investigation.

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